

(12) **United States Patent**  
**Lai**

(10) **Patent No.:** **US 9,408,533 B2**  
(45) **Date of Patent:** **\*Aug. 9, 2016**

(54) **SELF GUIDED SUBJECTIVE REFRACTION INSTRUMENTS AND METHODS**

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(71) Applicant: **Shui T Lai**, Windermere, FL (US)

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(72) Inventor: **Shui T Lai**, Windermere, FL (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(22) Filed: **Feb. 25, 2015**

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(65) **Prior Publication Data**

US 2015/0374225 A1 Dec. 31, 2015

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**Related U.S. Application Data**

(63) Continuation of application No. 14/158,926, filed on Jan. 20, 2014, now Pat. No. 8,967,801, which is a continuation of application No. 12/948,736, filed on Nov. 17, 2010, now Pat. No. 8,632,184.

*Primary Examiner* — Dawayne A Pinkney

(74) *Attorney, Agent, or Firm* — SF Bay Area Patents, LLC; Andrew V. Smith

(51) **Int. Cl.**

**A61B 3/10** (2006.01)

**A61B 3/00** (2006.01)

**A61B 3/032** (2006.01)

**A61B 3/028** (2006.01)

(57)

**ABSTRACT**

A refraction device determines a refraction end point to provide corrective optics for a test subject. The device includes an adjustable optical system providing corrective optics to the test subject and an adjustable viewing target disposed along an optical path such as to be viewable through the adjustable optical system by a test subject. The adjustable viewing target includes a directional indicator linked synchronously to at least two choices of corrective optics presented to the test subject.

(52) **U.S. Cl.**

CPC ..... **A61B 3/032** (2013.01); **A61B 3/0016** (2013.01); **A61B 3/0285** (2013.01)

(58) **Field of Classification Search**

CPC ..... A61B 3/103; A61B 13/005; A61B 3/113

USPC ..... 351/204–205, 200, 210

See application file for complete search history.

**39 Claims, 4 Drawing Sheets**

